

Effectiveness of Mindfulness-based Cognitive Therapy in Patients with Bipolar Affective Disorder: A Case Series

Abstract

The present investigation was undertaken to examine the effects of mindfulness-based cognitive therapy (MBCT) on interepisodic symptoms, emotional regulation, and quality of life in patients with bipolar affective disorder (BPAD) in remission. The sample for the study comprised a total of five patients with the diagnosis of BPAD in partial or complete remission. Each patient was screened to fit the inclusion and exclusion criteria and later assessed on the Beck Depressive Inventory I, Beck Anxiety Inventory, Difficulties in Emotion Regulation Scale, Acceptance and Action Questionnaire-II, and The World Health Organization Quality of Life Assessment-BREF. Following preassessments, patients underwent 8–10 weeks of MBCT. A single case design with pre- and post-intervention assessment was adopted to evaluate the changes. Improvement was observed in all five cases on the outcome variables. The details of the results are discussed in the context of the available literature. Implications, limitations, and ideas for future investigations are also discussed.

Keywords: Bipolar affective disorder, emotional regulation, interepisodic symptoms, mindfulness-based cognitive therapy, quality of life

Introduction

Bipolar affective disorder (BPAD) is a chronic, severe mental disorder that usually lasts lifelong, with devastating consequences for the affected individuals and society. The deleterious effects of this condition impact various domains of one's life including social, occupational, economic, and interpersonal.^[1-3] Although many patients with bipolar disorder are free of symptoms when in remission, a substantial number of them continue to experience mild clinical symptoms in the form of anxiety and depression and show functional impairments on psychosocial outcome variables.^[4-6]

Psychosocial treatments have found to be important as adjuncts to medication in the treatment of BPAD to address maintaining factors and prevent relapse. These include psychoeducation, cognitive behavioral therapy, Interpersonal and Social Rhythm Therapy, and Family Focused Therapy.^[7-9] Mindfulness-based cognitive therapy (MBCT) developed by Teasdale, Segal, and Williams is one of the new generation of cognitive behavioral therapies, which involves

mindfulness-based interventions.^[10,11] A few studies have explored the feasibility and potential benefits of MBCT in patients with bipolar disorder and have reported positive effects on interepisodic functioning and reduction in the residual symptoms of depression and anxiety.^[12,13] Psychological benefits of mindfulness are thought to be in terms of better regulation of one's emotions and increased acceptance of one's life situations, resulting in enhanced quality of life. Hence, the present investigation was undertaken to examine the effects of MBCT on interepisodic symptoms, emotional regulation, and quality of life in patients with BPAD.

Settings and Design

A single case design with pre- and post-assessments was adopted for the study. Five patients with a diagnosis of BPAD, according to the International Classification of Diseases-10 criteria,^[14] were recruited from the outpatient services of the National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru, Karnataka, India. The research protocol was reviewed and approved by the protocol Review Committee of the Department of

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Clinical Psychology for technical and ethical purposes. Written Informed consent for participation was obtained from all of them. These patients were in partial remission and were stabilized on medication. The cutoff scores for inclusion were determined as 18 or less on the Beck Depression Inventory-I (BDI-I) and <4 on the Young Mania Rating Scale. Patients having a history suggestive of organicity, neurological disorders, comorbid personality disorders, and those having undergone any structured psychological intervention in the past 1 year were excluded from the study.

Tools

A sociodemographic and clinical data sheet were developed for the study to gather information about patients and their illness history. The Mini International Neuropsychiatric Interview^[15] was used to establish the diagnosis of BPAD which was confirmed by a psychiatrist. Behavioral Analysis Pro forma^[16] was used to formulate the cases from Cognitive – Behavioral perspective. The BDI-I and Beck Anxiety Inventory (BAI) were used to assess the interepisodic symptoms. The Difficulties in Emotion Regulation Scale (DERS)^[17] was used to assess self-reported emotion regulation difficulties. Acceptance and Action Questionnaire-II (AAQ-II)^[18] was used to assess the impact of mindfulness training on experiential avoidance. To assess the quality of life, The World Health Organization Quality of Life Assessment-BREF (WHOQOL-BREF) was used.

Therapeutic procedure

The intervention program was a combination of Segal, Williams, and Teasdale's^[11] work on MBCT, and Marsha Linehan's^[19] work on Dialectic Behavior Therapy, especially the component of emotion regulation skills. It consisted of 8–12 sessions spread over 8–10 weeks, wherein sessions were held individually with each patient lasting for about 60–90 min. The components of the therapeutic program consisted of psychoeducation directed at developing understanding and acceptance of the disorder, mindfulness training through the practice of different variants of mindfulness meditation, and mindfulness of negative automatic thoughts and cognitive errors. Initial sessions focused on increasing nonjudgmental awareness through body scan and sitting meditation, homework assignments to practice mindfulness in daily activities with the aim of responding to the situations out of choice. Later, sessions focused primarily on emotional regulation and recognition of signs of relapse.

Case Reports

Case 1

Mr. R. R. was 35-year-old, married male and a software engineer by occupation. He had history of 6 episodes (4 depressive and 2 manic) over the last 10 years. The onset

of the first episode of depression was at the age of 25 years when he was doing postgraduation and was away from home staying alone in the hostel. He was simultaneously preparing for civil services examination and could not handle the pressure of studies. As a result, he failed to complete the course, developed feelings of worthlessness, preoccupation with the thoughts about future academic failures which led to a depressive episode. He was treated with pharmacotherapy. This was followed by manic episode a year later characterized by over-talkativeness, increased thoughts about God, and being extremely philosophical about life and death. Later episodes were precipitated by life events such as his marriage, a new job at a reputed company and travel to abroad. In one of these episodes, patient had attempted suicide and received inpatient care. He presented to NIMHANS 2 months following the recent episode with complaints of difficulty concentrating at work, reduced self-confidence, feelings of guilt, excessive moral worries in response to sexual thoughts, and disharmony in marital relationship.

Case 2

Miss B. 22-year-old female, studied up to 10th std., a semi-skilled worker and unmarried. There was a family history of bipolar illness in the patient's father. Both her parents died when she was 6-year-old, and she was raised by her grandparents. The patient had an early onset of BPAD-mixed affective state precipitated by her transition from school to college. Her symptoms then involved irritability, anger outbursts directed at family members, over-cheerfulness, and increased social interaction with strangers. Along with these symptoms, she also experienced periods of sad mood accompanied by social withdrawal and reduced psychomotor activity. Her behavior would oscillate from being cheerful to very dull, grooming excessively or neglecting self-care, overeating or poor appetite, and sleeping excessively to having insomnia. These symptoms continued for about 8 months after which she was treated with pharmacotherapy and showed significant improvement. However, a year later, she again presented to NIMHANS with the complaints of sad mood, reduced interest in work, easy fatigability, overactivity, over-cheerfulness, and over-talkativeness. The management of her symptoms again consisted of pharmacotherapy, with which her symptoms improved for next almost 4 years. However, she continued complaining of easy fatigability, lack of motivation to go to work, frequent headaches and occasional irritability and anger outbursts. She was referred for psychotherapy for the management of these residual symptoms.

Case 3

Mr. V.V., 35-year-old married man who had studied MBA and was a textile professional had a history of 2 episodes over last 10 years. There was a history of suicide in maternal uncle to whom the patient was closely attached. He had a conflictual relationship with his father, and there

was longstanding discord between the two. Patient’s first episode was precipitated by a fight with the father. He then became very restless, agitated, started talking irrelevantly, had reduced social inhibition, and suicidal ideations. He was treated with pharmacotherapy with which he maintained well for next 10 years.

Before presenting to NIMHANS, the patient was working abroad for about 9 years. He came to India in search of a job. About a month after joining work, he reported to be feeling very dull throughout the day and would feel very anxious at the workplace. He reported difficulty handling criticism and was hypersensitive to the comments from colleagues. He would get very angry at them, become easily tearful, and developed feeling of inferiority. He presented to NIMHANS for the management of dullness of mood, crying spells at workplace, and decreased interest in activities.

Case 4

Mr. A. K., 31-year-old married male was a software engineer. He had a personal history of anxious temperament and a difficult relationship with his father. The duration of his illness was 4 years with the onset at the time of his postgraduation where he was overstressed and was finding it difficult to cope up with the pressure. During this time, he used to feel anxious, had fear of failure, slowly became withdrawn, and developed insomnia. He also became irritable and used to get angry very easily. His condition gradually worsened. He would talk excessively, and later, his speech became irrelevant with grandiose ideas involving very ambitious goals. He could no longer continue his studies and left the course to come back to India where he was treated with pharmacotherapy. He recovered and maintained improvement for the next 2 years. Meanwhile, he got a job and also got married. A year later, he again started to have difficulties at workplace in coping with the demands of the job. His supervisors were reported to be dissatisfied with his work and wanted him to improve. He could not concentrate on his work as he would get doubts about his abilities. He was unable to find pleasure in any of his activities and also reported decreased libido. The patient was referred for psychotherapy for the management of these complaints.

Case 5

Mr. U was a 26-year-old unmarried high school teacher. There was a history of alcohol dependence in his father and severe marital discord in parents. His mother had committed suicide when the patient was 10-year-old. He presented to NIMHANS with a history of illness for 18 months. Till then, he was apparently functioning well. He had completed his degree and wanted to study further. However, because of the discord with the father at home and frequent arguments with him, he decided to be independent sooner. However, he was not able to find a job which led him to worry about his career, feel sad,

and to be very pessimistic and hopeless. At NIMHANS, he was treated with mood stabilizing medication. Following this, his mood became better, and he was feeling happy as he got a job as a school teacher. The second episode occurred 7 months later with some new complaints such as over-talkativeness, overspending, decreased need for sleep, and increased frequency of thoughts with sexual content. These thoughts would interfere in his work. He reported to be feeling extremely upset and guilty about the thoughts and was feeling ashamed to face his students. Patient’s diagnosis at this time was revised to BPAD -mixed affective state and his medication was reviewed. He was also referred for psychotherapy.

Statistical analysis

Statistical analysis involved comparison of Pre- and post-assessment scores for all the five cases to assess the effects of the intervention.

The following formula was used to calculate the percent of change in BDI, BAI, and DERS after the intervention program.^[20]

$$\frac{\text{Prescore} - \text{Postscore}}{\text{Pre}} \times 100$$

For AAQ-II and WHOQOL-BREF, the formula used was inverse as increase in the scores from pre to post was considered as improvement.

$$\frac{\text{Postscore} - \text{Prescore}}{\text{Post}} \times 100$$

Criterion for clinically significant improvement for clinical symptoms was set as 50% or more.

Results

As seen in Table 1, from pre- to post-intervention assessments, depression was reported to improve in all five cases as measured by BDI. The improvement was observed to range from 57% to 100% which was clinically significant in case of all five patients.

Table 1: Pre-post and change scores on measures of depression Beck Depression Inventory, Anxiety Beck Anxiety Inventory, and acceptance skills Acceptance and Action Questionnaire

Case	BDI			BAI			AAQ-II		
	Pre	Post	IP	Pre	Post	IP	Pre	Post	IP
I	28	8	71	19	9	52	32	53	40
II	14	6	57	11	7	36	34	59	42
III	24	0	100	31	12	61	24	52	54
IV	23	9	61	28	11	61	18	34	47
V	29	13	68	31	10	68	18	37	51

IP = Improvement in percentage, BDI = Beck Depression Inventory, BAI = Beck Anxiety Inventory, AAQ II = Acceptance and Action Questionnaire

Improvement was also noted in all five cases in subjective report of anxiety as measured by BAI. The percent of improvement was observed to range from 36% to 68% and met the criterion of clinical significance in four cases. The results indicated enhancement in acceptance in all cases ranging from 40% to 54%. However, it was clinically significant in only two cases as measured by AAQ-II.

Emotional difficulties were seen to improve from pre- to post-intervention as measured by the DERS. Out of five, in two cases, the total percentage of improvement met the criterion of clinical significance (>50%). Case III showed clinically significant improvement on all the subscales of DERS. All five cases showed clinically significant improvement on two subscales of DERS, namely, nonacceptance of emotional response (58%–73%) and limited access to emotion regulation strategies (50%–60%). On the subscale of difficulty in goal-directed behavior, three patients showed clinically significant improvement (58%–61%). Similarly, on the lack of emotional awareness subscale, three patients showed clinically significant improvement (58%–60%). Two patients including Case III showed clinically significant improvement in impulse control difficulties meeting the criterion for clinical significance [Table 2].

Overall, quality of life was found to have improved in case of all five patients except for Case I in environmental domain. However, the percentage of improvement ranged from 8% to 43% and hence did not reach the criterion for clinical significance in any of the cases [Table 3].

Discussion

The first objective of the study was to examine the effects of MBCT in reducing the severity of interepisodic

symptoms. In the present study, interepisodic symptoms were considered as anxiety and depression. The findings suggest that MBCT was effective in reducing depressive symptoms (57%-100%) and are consistent with those reported in the previous study on patients with bipolar disorder where they had showed reduction in residual depressive symptoms.^[12] The beneficial effects of MBCT in especially reducing symptoms of depression may be attributed to the change in cognitive reactivity and reduction in ruminations.^[21]

The study results also showed MBCT to be effective in reducing anxiety symptoms. This finding is similar to an earlier study which reported a protective effect of MBCT on anxiety symptoms in patients with BPAD.^[12] Patients with high level of anxiety are found to engage in many forms of perseverative cognition, including worry, anticipatory anxiety, and rumination that are associated with increased sympathetic arousal.^[22] As mindfulness practice increases one’s ability to maintain a stable focus of attention that is intentional and chosen, as opposed to automatically driven by emotional reactivity, it may bring about changes in above-mentioned maladaptive patterns of thinking resulting in decreased physiological arousal and somatic symptom manifestation. There has been evidence for greater parasympathetic activation after body scan meditation, highlighting the self-regulatory mechanism of mindfulness meditation practice in reducing symptoms of anxiety.^[23]

The present findings indicate that intervention was successful in helping patients increasing the acceptance of emotions and employ adaptive emotion regulation strategies. Study findings also explore and document the positive changes in acceptance or psychological flexibility

Table 2: Pre-post and change scores on measure of emotion regulation Difficulties In Emotion Regulation Scale

Case	DERS 1			DERS 2			DERS 3			DERS 4			DERS 5			DERS 6		
	Pre	Post	IP															
I	19	8	58	14	10	28	18	11	39	20	11	45	32	14	56	17	8	52
II	18	8	56	21	12	43	14	11	21	24	10	58	26	12	54	23	17	26
III	21	8	62	22	9	59	27	9	66	20	8	60	31	14	55	19	7	63
IV	19	5	73	26	11	58	24	13	46	22	9	59	30	12	60	18	10	44
V	24	19	58	18	7	61	24	8	67	19	11	42	26	13	50	17	9	47

DERS 1 = Nonacceptance of emotional response, DERS 2 = Difficulty in goal-directed behavior, DERS 3 = Impulse control difficulties, DERS 4 = Lack of emotional awareness, DERS 5 = Limited access to emotion regulation strategies DERS 6 = Lack of emotional clarity, DERS = Difficulties in Emotion Regulation Scale, IP = Improvement in percentage

Table 3: Pre-post and change scores on the World Health Organization Quality of Life-BREF

Client number	Physical			Psychological			Social			Environmental			Total		
	Pre	Post	IP	Pre	Post	IP	Pre	Post	IP	Pre	Post	IP	Pre	Post	IP
I	15	17	12	10	16	38	8	9	11	17	17	0	50	59	15
II	16	25	36	18	29	38	11	15	27	21	26	19	66	95	31
III	23	25	8	19	23	17	7	10	30	19	24	21	68	86	21
IV	20	24	17	13	22	41	9	12	33	20	24	17	62	82	24
V	22	24	8	12	21	43	8	13	38	14	17	18	56	75	25

IP = Improvement in percentage

following MBCT in patients with BPAD. Development of acceptance is thought to be mediated by mindfulness skills. The role of self-acceptance is highlighted in mediating the effects of mindfulness on depressive symptoms. The results are consistent with a study conducted on patients with various subtypes of bipolar disorder which reported improvement in mindfulness skills following intervention.^[13]

Effects of MBCT on emotional regulation in patients with BPAD have been encouraging too. The reduction in emotional dysregulation may be explained on the basis of increase in the mindfulness of one's emotions, leading to increased awareness, and sensitivity to emotional cues which they usually tend to avoid.^[21] Mindfulness is thought to train individuals to focus inwardly, cultivate an acceptance of emotion as a part of human experience, and allow individuals to practice identifying and experiencing emotion without reacting to it.^[24]

Results regarding effects of MBCT on quality of life in patients with BPAD have not met the criterion for clinical significance. Further, the findings are mixed, which may be explained based on the duration of the therapy program. The quality of life being a multidimensional construct is subject to influence of multiple social and cultural factors, which may not have been addressed in a short span of time. Hence, a longer duration of therapy and follow-up assessments may be required to further evaluate therapeutic gains related to this variable.

The present study was one of the initial attempts in India, to check the feasibility and utility of MBCT for Bipolar disorder. While interpreting the findings, it should be noted that mindfulness-based approach of therapy was found to be suitable for clients in partial remission, with relatively fewer episodes and residual symptoms. Small sample size is the significant limitation of the present study; these findings have restricted generalizability. In addition, there was absence of a control group to compare the significance of therapeutic gains. We suggest future studies should aim for larger sample sizes to allow for rigorous statistical analysis and longer follow-up assessments to confirm these preliminary findings.

Conclusion

Following 8 weeks of MBCT, patients with BPAD showed clinically significant reduction in interepisodic symptoms (depression and anxiety), difficulties in emotion regulation, and improvement in acceptance skills. The present study provides preliminary evidence for the usefulness of mindfulness-based approach in the treatment of BPAD clients.

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Conflicts of interest

There are no conflicts of interest

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